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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,310	04/22/2005	Naoshi Masukawa	123522	1502
25944	7590	12/11/2007		
OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850			EXAMINER CLEMENTE, ROBERT ARTHUR	
			ART UNIT	PAPER NUMBER
			1797.	
			MAIL DATE	DELIVERY MODE
			12/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,310	Applicant(s) MASUKAWA ET AL.	
	Examiner Robert A. Clemente	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: The references to specific claims throughout the specification (such as in paragraphs 16, 18, 20, 24, 26, 28, and 30) should be removed since claims can be changed and deleted, and claim numbering can change.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 11 – 13, 15 – 18, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Application Publication No. 2005/0109023 to Kudo et al.

Kudo teaches a honeycomb structure comprising: porous partition walls, and a plurality of cells each functioning as a passage of a fluid, surrounded by the porous partition walls and arranged so as to be parallel to each other in the central axis direction of the honeycomb structure, characterized in that a plurality of honeycomb segments having such a shape that each segment is part of the honeycomb structure

and, when bonded to each other in a direction normal to the central axis of the honeycomb structure, forms the honeycomb structure, are bonded integrally by a bonding material, which contains a ceramic as a main component and a particulate filler, and the resulting bonded body is coated, at the outer surface, with a coating material containing a ceramic as a main component and a particulate filler. Figure 1 shows the honeycomb filter (10), or honeycomb structure, of Kudo. The honeycomb filter (10) is made up of porous ceramic members (20), or honeycomb segments, as detailed in figure 2. Since the honeycomb filter (10) is made from porous members, the partition walls (23) are inherently porous. As shown in figure 2(b), the porous members (20) include a plurality of through holes (21), or cells, that function as a passage of a fluid and are surrounded by the partition walls (23). As shown in figure 1, the porous members (20), forming the honeycomb filter (10), are bonded to each other so that each is arranged normal to a central axis of the honeycomb filter (10). The porous members (20) are bonded with adhesive layers (14) and the honeycomb filter (10) is coated with a coating material layer (13). As disclosed in paragraphs 86 and 89, the adhesive layer (14), or bonding material, can include inorganic ceramic fibers. As disclosed in paragraph 133, the content of the inorganic fibers in the adhesive layer can be up to 70% by weight. Thus, the main component of the adhesive layer (14) would be a ceramic. Further, as disclosed in paragraph 93, the adhesive layer (14) may also include various particulate fillers, such as inorganic balloons. As disclosed in paragraph 142, the coating material can be the same material used for the adhesive layer. Thus,

both the adhesive layer (14) and coating material layer (13) would contain a ceramic as a main component and a particulate filler.

In regard to claims 12, 13, 17 and 18, as disclosed in paragraphs 96 – 98, the particulate filler can have a hollow sphere shape with an average diameter from 30 to 300 microns, which overlaps the claimed range of 10 to 300 microns with sufficient specificity to anticipate the claims.

In regard to claims 15 and 20, as disclosed in paragraph 86, the adhesive material, and thus the coating material, can contain inorganic particles or an inorganic binder. As disclosed in paragraph 87, the inorganic binder can be silica or alumina sols, which are colloidal oxides.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kudo.

Kudo is discussed above in paragraph 3. As discussed in paragraph 93 of Kudo, the particulate fillers make it possible to control the porosity of the adhesive layer (14). One of ordinary skill in the art would understand that the volume content of the particulate fillers in the adhesive layer would be what affects the porosity; however, Kudo does not disclose the amount of particulate filler by volume. A larger volume of particulate fillers would predictably yield a material with a higher porosity and visa versa for a smaller volume. Thus, one of ordinary skill in the art would reasonably expect to easily be able to create a material with a desired porosity through routine experimentation with the volume of the filler used.

It would have been obvious to one of ordinary skill in the art to choose or optimize the amount of particulate filler used to be in the range of 20 to 70% by volume in order to produce an adhesive layer with the desired porosity.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Other prior art references listed on the PTO-892 (Notice of References Cited) are considered to be of interest disclosing similar honeycomb structures.

Application/Control Number:
10/532,310
Art Unit: 1797

Page 6

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Clemente whose telephone number is (571) 272-1476. The examiner can normally be reached on M-F, 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert A Clemente
Examiner
Art Unit 1797

RAC

DUANE SMITH
PRIMARY EXAMINER
12-7-07